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Papers: Guiding Principles for the Development of a Arboretum at SUBC

Buffalo State College

Guiding Principles for the Development of a Proposed Arboretum on the Campus of State University College at Buffalo

According to The Yearbook of Agriculture, 1962, the United States National Museum in Washington, D. C., is

1. An educational institution
2. An outdoor museum in which one can study many kinds of trees, shrubs, and other plants which are arranged in pleasing patterns
3. A research institution
4. A place for recreation, but not a picnic area, nor a park in the usual sense.

As an educational institution, especially on a campus, an arboretum should be a planting of as many native species and exotics as will grow in the particular environment involved. The term exotic should not be interpreted to mean strictly cultivated ornamentals nor a predominance of any one ornamental species. Again as an educational institution the arboretum should be dominated by native species approaching the proportion that exists in the natural environment of the region. Other plants, especially those native in local fields and woodlands should be represented in appropriate sites among the woody plantings.

According to Zenkert, Flora of the Niagara Frontier Region, the following woody plants occur in approximately the following order of abundance in the valley of Cazenovia Creek, a region characteristic of much of the Erie Plain:

TREES

Fagus grandifolia
Acer saccharum
Tsuga canadensis
Betula lenta
Ostrya virginiana
Carpinus caroliniana
Acer rubrum
Quercus borealis, var. maxima
Quercus alba
Prunus pennsylvanica
Populus tremuloides
Populus grandidentata
Populus deltoides
Rhus typhina

Ulmus americana
Ulmus fulva
Ulmus racemosa
Pinus Strobus
Juglans cinerea
Juglans nigra
Carya ovata
Carya glabra
Amelanchier laevis
Amelanchier canadensis
Fraxinus americana
Tilia americana
Platanus occidentalis
Liriodendron Tulipifera

SHRUBS AND UNDERSHRUBS

Prunus virginiana
Hamamelis virginiana
Taxus canadensis
Viburnum acerifolium
Cornus stolonifera
Cornus paniculata
Cornus rugosa
Crataegus punctata
Crataegus roanesis
Crataegus Pringlei
Sambucus canadensis
Sambucus racemosa
Rubus allegheniensis
Rubus occidentalis
Rubus odoratus
Salix cordata
Salix longifolia
Evonymus obovatus
Lonicera canadensis
Diervilla Lonicera
Ribes americanum
Ribes Cynosbati

The variety of plants which occur in this area is increased by the modifying effects of Lake Erie on adjacent uplands with the result that a number of southern and some western species are intermingled with those of the more northern association. The Cattaraugus Creek area northeast of Gowanda illustrates these effects.

The following list from Zenkert gives illustrative plants.

TREES AND SHRUBS

Quercus montana
Quercus Muhlenbergii
Acer spicatum
Cornus florida
Cornus Baileyi
Cornus asperifolia
Sassafras officinale
Asimina triloba
Aralia spinosa
Malus coronaria
Crataegus rugosa
Crataegus succulenta
Alnus incana
Corylus americana
Staphylea trifolia
Zanthoxylum americanum
Evonymus atropurpureus
Rhododendron nudiflorum, var. roseum
Spiraea alba
Vaccinium stamineum
Rosa setigera, var. tomentosa
Myrica asplenifolia
Taxus canadensis
Ceanothus americanus
Ribes triste, var. albinervium
Epigaea repens
Gaultheria procumbens
Vitis bicolor
Smilax hispida

Limestone areas have an important influence on the flora of this region. Woody plants occurring as the result of this influence are indicated by Zenkert's list for the "Limestone Areas Northeast of Buffalo."

Quercus Muhlenbergii
Quercus macrocarpa
Rhus typhina
Malus coronaria, var. glaucescens
Crataegus pruinosa
Staphylea trifolia
Zanthoxylum americanum
Viburnum affine
Amelanchier sanguinea
Cornus rugosa
Celastrus scandens

Obviously, the composition of an arboretum representative of this area should be predominantly of a deciduous type with an intermingling of conifers such as:

Pinus strobus
Tsuga canadensis
Juniperus Virginiana
Thuja occidentalis

Characteristically an arboretum includes research among its functions. At our institution research would be a particularly appropriate function. To this end a plot or plots should be provided for experimental work, such as testing the adaptability of plants to this area; genetic studies of hybridization in pines, oaks, and poplars; and culture methods for ornamental species.

As long as the composition characteristic of the vegetation of the region dominates an arboretum, cultivated and exotic developments for beauty and cultural enjoyment may properly be included.

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George M. Laug
Theodore Eckert

The Process of Tree or Shrub Planting

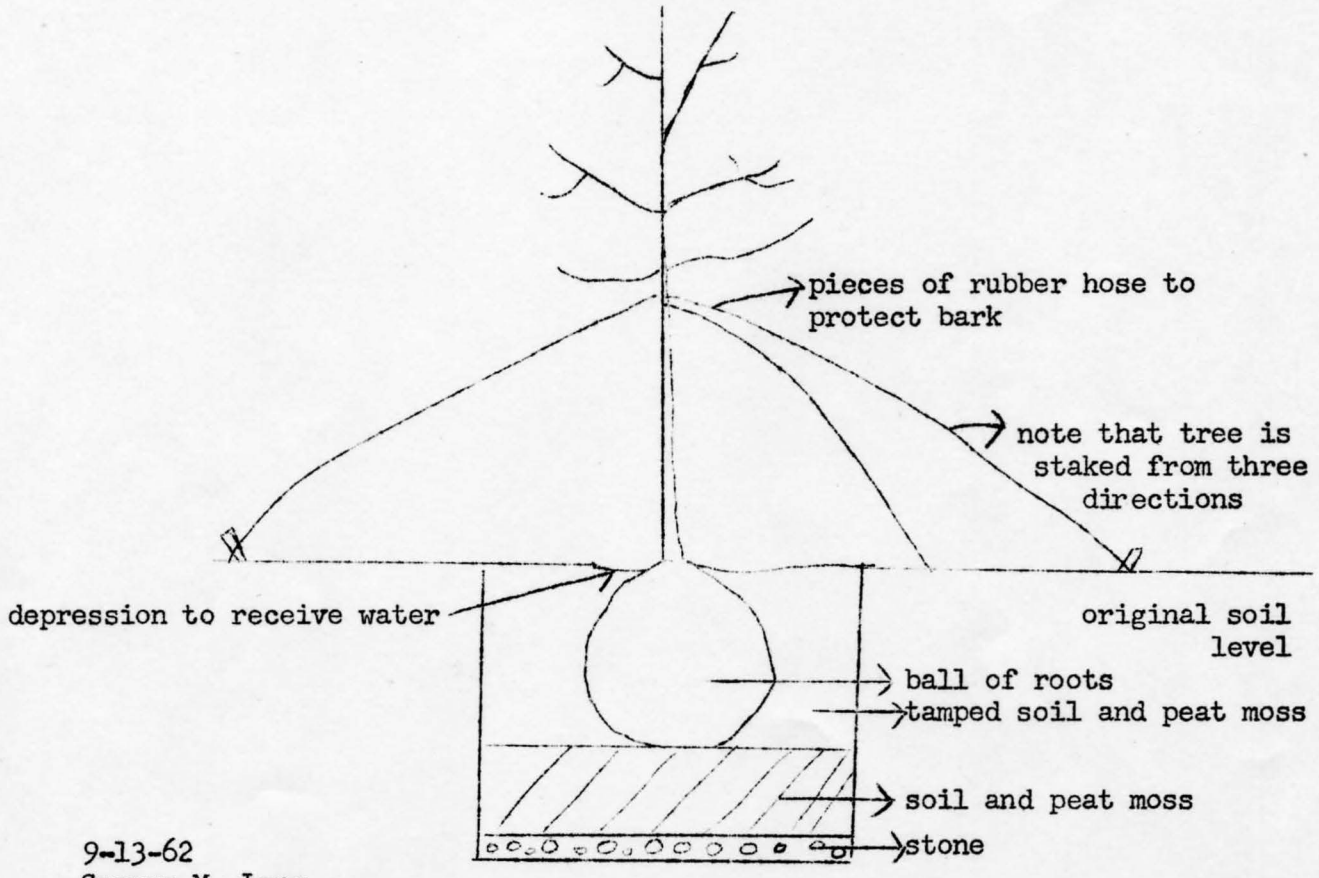
Trees or shrubs planted on our campus must be planted properly in order to thrive and survive. The best stock purchased would be burlap wrapped or grown in a basket. The burlap is not removed in planting, only loosened; and if in a basket, the basket is lowered into the ground.

A hole must be dug which is approximately twice the width and depth of the ball of roots. The bottom of the hole should be lined with broken rocks or masonry to a depth of at least three inches. Rich top soil should be mixed with equal parts of peat moss and placed in the hole in order to bring the top of the ball of roots up to the natural level of the ground. After the tree is lowered into the hole, the same mixture of soil and peat poss is tamped around the roots after water has been added. The tamping of the soil around the roots is most important.

After the tree or shrub is in place, a slight depression is left around the trunk to receive water.

For the first <u>two</u> years following planting, the new stock <u>must not</u> be allowed to dry out. All stock over 1/2 inch in diameter must be staked to avoid movement in the ground by wind or other means. Please see the following diagram.

When actual tree or shrub planting is to be done, Dr. George M. Laug would be most willing to give on the spot instruction.



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